



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

230 SOUTH DEARBORN ST.

CHICAGO, ILLINOIS 60604

22 NOV 1985

REPLY TO THE ATTENTION OF  
5HE-12

Mr. Sam McWilliams  
Plant Manager  
Ethyl Petroleum Additives  
Sauget, Illinois 62201

Re: Administrative Order V-W-84-007  
Groundwater Sampling Plan

Dear Mr. McWilliams:

I have reviewed your letter of October 23, 1985 in which the proposal for several sampling schemes was submitted. The following are the U.S. Environmental Protection Agency's comments on the proposal.

The sampling proposals for sample point I and along Track 23 are approved as submitted.

The resampling of location 33 is questioned by the Agency. We are not requiring this and do not recall this issue being raised at our last meeting. I can not understand why Ethyl proposes to take one sample to reduce the significantly contaminated area boundary by an area in which two sample locations have previously showed 2,3,7,8-TCDD at levels above 1 ppb.

Ethyl Petroleum Additives may proceed with "on-site specific construction projects" within the significantly contaminated area without prior approval from the Agency provided Ethyl continues to use previously approved plans. However, U.S. EPA must be kept informed as to what construction takes place, the disposition of any removed soil and the results of any analytical work. Ethyl should inform the Agency of planned construction activity at least one week before initiating the work. The Agency reserves the right to require prior approval in the future if deemed necessary.

The groundwater monitoring system shown in Attachment 1, Figure 1 will not be adequate to definitively show a negative release should this be the case. With the complicated groundwater system in the area, three monitoring wells located so far from the black tank area and Unit 268 will not confirm the absence or presence of 2,3,7,8-TCDD. The past groundwater pumping practice of Monsanto and the current withdrawals by the State of Illinois further complicates the issue.

With this mind, I believe monitoring wells should be triangulated near the black tank area and near Unit 268. In the black tank area, the wells should be placed as close to the outside of the dike area as possible. I have enclosed a copy of Figure 1 from the IT Corporation proposal with an indication of where the monitoring wells should be placed. I am willing to discuss moving these locations subject to field conditions.

In regards to the monitoring well design (Figure 2), I do not agree with the sump section below the well screen. A 3/8th inch clean pea gravel or silica sand should be sufficient to keep soil/sediment penetration to a minimum. The sump will tend to allow the groundwater to stagnate.

During sampling, the volume of water in the well should be determined by measuring the depth to water from the top of the PVC casing. This depth should be subtracted from the total depth. The calculated volume of water from this should be used to determine the amount to be withdrawn for the three well volumes.

Priority pollutants should be analyzed according to Methods 624 and 625 at all monitoring wells. This will be done to determine if any of these pollutants could be shown to be carriers for 2,3,7,8-TCDD and/or the congeners. At Ethyl's discretion, this sampling may take place only if 2,3,7,8-TCDD and/or the congeners are found in an initial groundwater sampling. If 2,3,7,8-TCDD and/or the congeners are not found in the groundwater, a priority pollutant analysis will not be required.

The detection limits for 2,3,7,8-TCDD and the congeners should be specified in the plan at the parts per trillion level. Ethyl should also indicate that the detection limits for the priority pollutant analyses will be those specified in Methods 624 and 625.

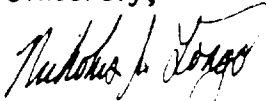
Ethyl Petroleum Additives is requested to notify U.S. EPA at least one week before drilling is to start. I intend to be at the site for part of the drilling. U.S. EPA should also be notified before any construction takes place in the significantly contaminated area. Ethyl will not need U.S. EPA's approval before any such construction takes place.

U.S. EPA proposes to make the modifications to your plan that are set out in this letter and approve the plan with these modifications in accordance with Section 12(d) of the Administrative Order. Ethyl may request a conference to discuss these modifications before U.S. EPA issues a final approval.

After this final phase of the investigation, Ethyl should consider conducting a feasibility type study to assist the Agency in determining any remedial alternative that is needed.

Please direct your response to the Agency comments to me within 2 weeks of the date of this letter. If you have any questions, please call me at (312) 886-4746 or Tom Daggett at (312) 353-2094.

Sincerely,

A handwritten signature in black ink, appearing to read "Nicholas J. Longo". The signature is written in a cursive, flowing style.

Nicholas J. Longo  
Remedial Project Manager  
Hazardous Waste Enforcement Branch

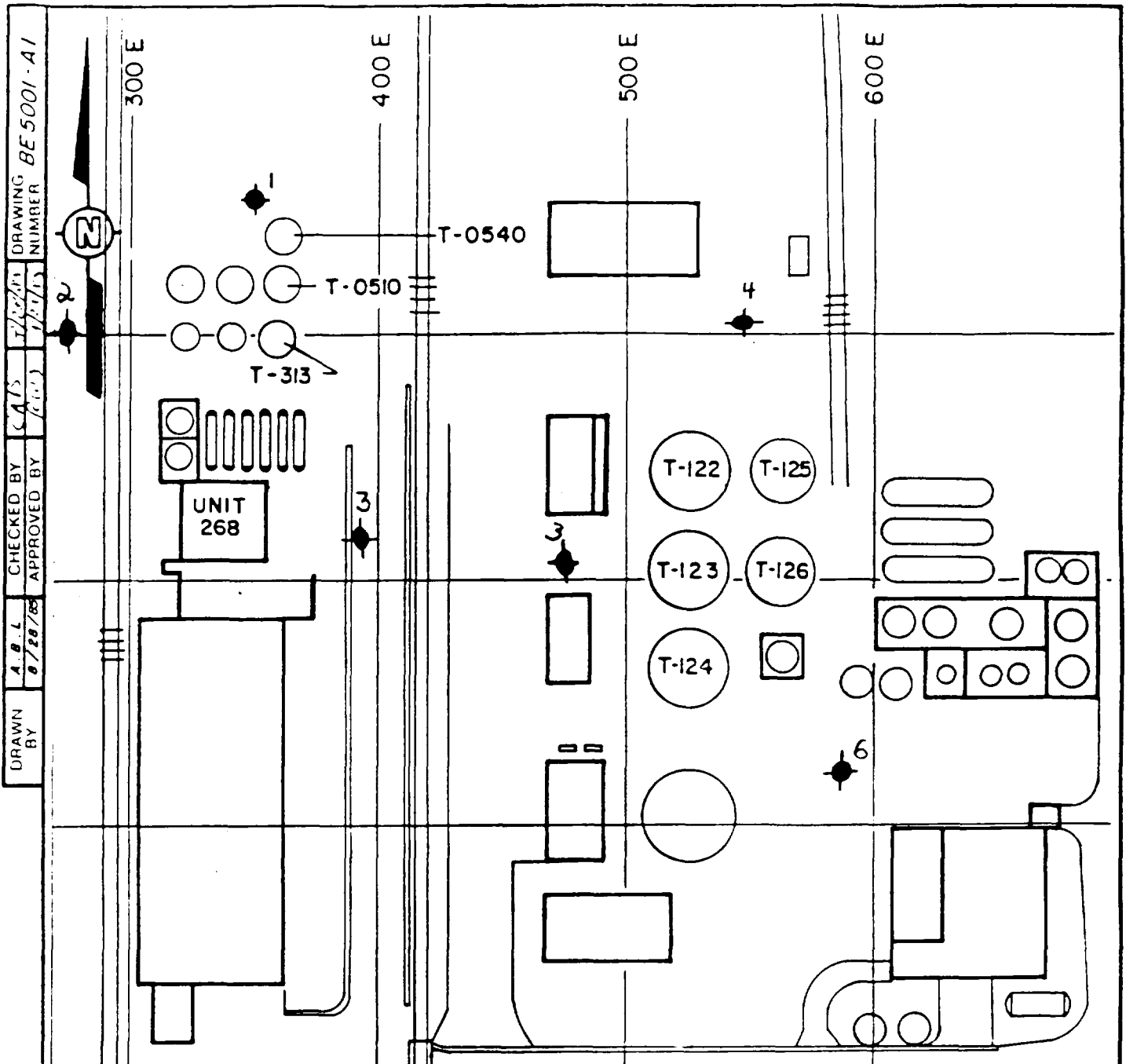


FIGURE 1

PROPOSED WELL LOCATIONS

PREPARED FOR

ETHYL PETROLEUM  
ADDITIVES DIVISION  
SAUGET, ILLINOIS

